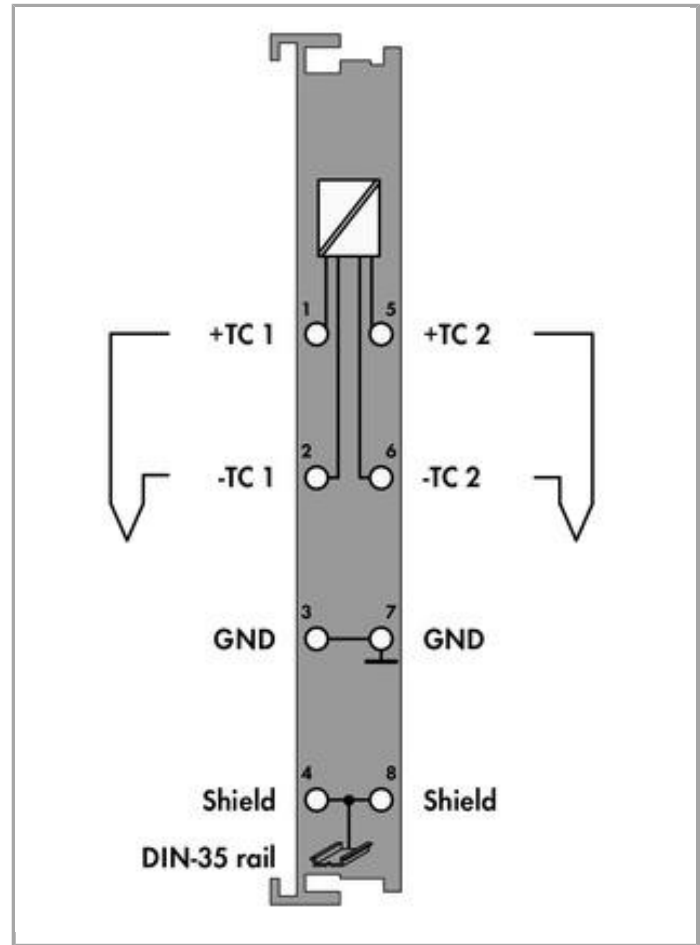
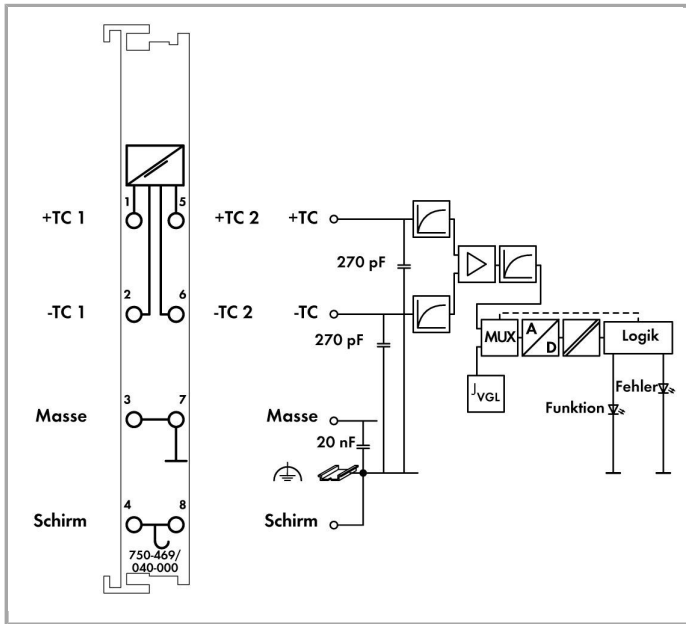


RoHS Compliant

[BOMcheck.net](https://www.bomcheck.net)



## Item description

This input module directly connects to two thermocouples. Internal electrical isolation allows operation of grounded sensors.

The bus module linearizes the entire temperature range.

Cold junction compensation mitigates the clamping unit offset voltage over the 0–55°C operating range.

A line break is indicated by a red LED. A green LED indicates readiness for operation and error-free communication with the bus coupler.

The shield (screen) is directly connected to the DIN rail.

The module is ideally suited for operation in harsh environmental conditions:

- strongly extended temperature range
- higher dielectric strength and EMC resistance
- higher vibration and shock resistance

## Data

### Technical Data

|                                   |              |
|-----------------------------------|--------------|
| Number of analog inputs           | 2            |
| Total number of channels (module) | 2            |
| Type of signal                    | Thermocouple |



|  | Low voltages  |
|--|---|
| Configurable type of signal              | yes   |
| Sensor connection                        | 2 x (2-conductor)   |
| Bit width                                | 2 x 16-bit data; 2 x 8-bit control/status (optional)  |
| Internal resistance                      | 1000 k $\Omega$   |
| Resolution (over entire range)           | 0.1 °C  |
| Conversion time (typ. $\leq$ )           | 320 ms  |
| Measuring error (25 °C)                  | $< \pm 6$ K (volt. input $< \pm 2$ K, cold junct. $< \pm 4$ K)  |
| Temperature coefficient                  | $< \pm 0.2$ K/K   |
| Sensor types                             | Type L: -100°C ... +900°C; Type K: -100°C ... +1370°C; Type J: -100°C ... +1200°C; Type E: -100°C ... +1000°C; Type T: -100°C ... +400°C; Type N: -100°C ... +1300°C; Type U: -25°C ... +600°C; Type B: +600°C ... +1800°C; Type R: 0°C ... +1700°C; Type S: -50°C ... +1700°C; -30 mV ... +30 mV; -60 mV ... +60 mV; -120 mV ... +120 mV |
| Temperature range                        | sensorabhängig  |
| Cold junction compensation               | at each pair of terminal blocks   |
| System supply voltage                    | DC 5 V; via data contacts   |
| Current consumption, system supply (5 V) | 65 mA   |
| Dielectric strength                      | AC 510 V/DC 775 V; gemäß EN 60870-2-1   |
| Rated surge voltage                      | 1 kV  |

### Connection data

|                                    |  |
|------------------------------------|--|
| Connection technology: In-/Outputs | 8 x CAGE CLAMP®                              |
| Connection type (1)                | Inputs/Outputs                               |
| Solid conductor                    | 0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG |
| Fine-stranded conductor            | 0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG |
| Strip length                       | 8 ... 9 mm / 0.31 ... 0.35 Inch              |

### Geometrical Data

|                                       |                      |
|---------------------------------------|----------------------|
| Width                                 | 12 mm / 0.472 inch   |
| Height                                | 67.8 mm / 2.669 inch |
| Height from upper-edge of DIN-35 rail | 60.6 mm / 2.386 inch |
| Depth                                 | 100 mm / 3.937 inch  |

### Mechanical data

|                  |             |
|------------------|-------------|
| Type of mounting | DIN-35 rail |
|------------------|-------------|

### Material Data

|                    |                              |
|--------------------|------------------------------|
| Housing material   | Polycarbonate, polyamide 6.6 |
| Weight             | 38.806 g                     |
| Conformity marking | CE                           |

## Environmental Requirements

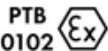
|  |  |
|--|--|
| Surrounding air (operating) temperature  | -40 ... 70 °C  |
| Surrounding air (storage) temperature  | -40 ... 85 °C  |
| Degree of protection   | IP20   |
| Degree of pollution (5)  | 2 per IEC 61131-2  |
| Operating altitude   | without temperature derating: 0 ... 2000 m; with temperature derating: 2000 ... 5000 m (0.5 K/100 m); max.: 5000 m   |
| Mounting position  | horizontal (standing/lying) or vertical  |
| Relative air humidity (no condensation)  | 95 %   |
| Relative humidity  | Short-term condensation per Class 3K7/IEC EN 60721-3-3 and E DIN 40046-721-3 (except wind-driven precipitation, water and ice formation)                     |
| Vibration resistance   | acc. to IEC 60068-2-6 (acceleration: 5g), EN 60870-2-2, IEC 60721-3-1, -3, EN 50155, EN 61373  |
| Shock resistance   | acc. to IEC 60068-2-27 (15g/11 ms/half-sine/1000 shocks; 25g/6 ms /1000 shocks), EN 50155, EN 61373  |
| EMC immunity to interference   | acc. to EN 61000-6-1, -2, EN 61131-2, marine applications, EN 50121-3-2, -4, -5, EN 60255-26, EN 60870-2-1, EN 61850-3, IEC 61000-6-5, IEEE 1613, VDEW: 1994 |
| EMC emission of interference   | acc. to EN 61000-6-3, -4, EN 61131-2, EN 60255-26, marine applications, EN 60870-2-1, EN 61850-3, EN 50121-3-2, EN 50121-4, -5                               |
| Exposure to pollutants   | Per IEC 60068-2-42 and IEC 60068-2-43  |
| Permissible H <sub>2</sub> S contaminant concentration at a relative humidity < 75 % | 10 ppm   |
| Permissible SO <sub>2</sub> contaminant concentration at a relative humidity < 75 %  | 25 ppm   |

## Commercial data

|                    |                 |
|--------------------|-----------------|
| Country of origin  | DE              |
| GTIN               | 4050821460336   |
| Customs Tariff No. | 85389099990     |
| Product Group      | 15 (Remote I/O) |

## Approvals / Certificates

### Ex-Approvals

| Logo   | Approval                    | Certificate name     |
|--|-----------------------------|----------------------|
|  | ATEX<br>TUEV Nord Cert GmbH | TUEV 17 ATEX 193969X |
|  | IECEX                       | IECEX TUN 16.0046X   |

TUEV Nord Cert GmbH



UL  
Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)

E198726 Sec.1 (HAZARDOUS LOCATIONS)

## Country specific Approvals

| Logo   | Approval                             | Certificate name    |
|--|--------------------------------------|---------------------|
|  | KC<br>National Radio Research Agency | MSIP-REM-W43-AIM750 |
|  | KC<br>National Radio Research Agency | MSIP-REM-W43-AIM750 |

## Ship Approvals

| Logo   | Approval   | Certificate name  |
|--|--|-------------------|
|  | ABS<br>American Bureau of Shipping               | 18-HG1778162-PDA  |
|  | DNV GL<br>Det Norske Veritas, Germanischer Lloyd | TAA00000Y7        |
|  | GL<br>Germanischer Lloyd                         | 95043-14HH        |
|  | LR<br>Lloyds Register                            | 17/20073 LR       |
|  | PRS<br>Polski Rejestr Statków                    | TE/2215/880590/18 |

## UL-Approvals








| Logo   | Approval | Certificate name                   |
|--|----------|------------------------------------|
|  | UL       | E175199 Sec.1 (ORDINARY LOCATIONS) |



UL International Netherlands B.V. (ORDINARY LOCATIONS)




## Compatible products

### shield connection








|  |   |  |
|--|---|--|
|    | <b>Item no.: 790-108</b><br>Shield clamping saddle; 11 mm wide; diameter of compatible conductor              | <a href="http://www.wago.com/790-108">www.wago.com/790-108</a> |
|    | <b>Item no.: 790-116</b><br>Shield clamping saddle; 19 mm wide; diameter of compatible conductor; 7 ... 16 mm | <a href="http://www.wago.com/790-116">www.wago.com/790-116</a> |
|    | <b>Item no.: 790-124</b><br>Shield clamping saddle; 27 mm wide; diameter of compatible conductor; 6 ... 24 mm | <a href="http://www.wago.com/790-124">www.wago.com/790-124</a> |
|    | <b>Item no.: 790-140</b><br>Shield clamping saddle; diameter of compatible conductor                          | <a href="http://www.wago.com/790-140">www.wago.com/790-140</a> |
|    | <b>Item no.: 790-208</b><br>Shield clamping saddle; 12.4 mm wide; 3 ... 8 mm                                  | <a href="http://www.wago.com/790-208">www.wago.com/790-208</a> |
|   | <b>Item no.: 790-216</b><br>Shield clamping saddle; 21.8 mm wide; 6 ... 16 mm                                 | <a href="http://www.wago.com/790-216">www.wago.com/790-216</a> |
|  | <b>Item no.: 790-220</b><br>Shield clamping saddle; 30 mm wide; 6 ... 20 mm                                   | <a href="http://www.wago.com/790-220">www.wago.com/790-220</a> |






### system box

|  |   |  |
|--|---|--|
|  | <b>Item no.: 850-804</b><br>IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 4 x M20, 16 x M16, 28 x M12 cable grip         | <a href="http://www.wago.com/850-804">www.wago.com/850-804</a>                 |
|  | <b>Item no.: 850-804/000-001</b><br>IP65 enclosure; Stainless steel; WxHxD (400x123x200 mm); 2 x M20, 13 x M16, 32 x M12 cable grip | <a href="http://www.wago.com/850-804/000-001">www.wago.com/850-804/000-001</a> |
|  | <b>Item no.: 850-805</b><br>IP65 enclosure; Stainless steel; WxHxD (600x123x200 mm); 4 x M20, 19 x M16, 67 x M12 cable grip         | <a href="http://www.wago.com/850-805">www.wago.com/850-805</a>                 |
|  | <b>Item no.: 850-814/002-000</b><br>IP65 enclosure; Sheet steel (RAL 7035); WxHxD (200x120x200 mm); without flange plate            | <a href="http://www.wago.com/850-814/002-000">www.wago.com/850-814/002-000</a> |
|  | <b>Item no.: 850-815/002-000</b><br>IP65 enclosure; Sheet steel (RAL 7035); WxHxD (300x120x200 mm); without flange plate            | <a href="http://www.wago.com/850-815/002-000">www.wago.com/850-815/002-000</a> |
|  | <b>Item no.: 850-816/002-000</b><br>IP65 enclosure; Sheet steel (RAL 7035); WxHxD (400x120x200 mm); without flange plate            | <a href="http://www.wago.com/850-816/002-000">www.wago.com/850-816/002-000</a> |
|  | <b>Item no.: 850-817/002-000</b><br>IP65 enclosure; Sheet steel (RAL 7035); WxHxD (600x120x200 mm); without flange plate            | <a href="http://www.wago.com/850-817/002-000">www.wago.com/850-817/002-000</a> |












|  |  |  |
|--|--|--|
|    | <b>Item no.: 850-825</b><br>IP65 enclosure; Aluminium (RAL 7032); WxHxD (160x100x160 mm); 9 x M12, 4 x M20                               | <a href="http://www.wago.com/850-825">www.wago.com/850-825</a>                 |
|    | <b>Item no.: 850-826</b><br>IP65 enclosure; Aluminium (RAL 7032); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip          | <a href="http://www.wago.com/850-826">www.wago.com/850-826</a>                 |
|    | <b>Item no.: 850-826/002-000</b><br>IP65 enclosure; Aluminium (RAL 7035); WxHxD (240x100x160 mm); 4 x M20, 4 x M16, 14 x M12 cable grip  | <a href="http://www.wago.com/850-826/002-000">www.wago.com/850-826/002-000</a> |
|    | <b>Item no.: 850-827</b><br>IP65 enclosure; Aluminium (RAL 7032); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip          | <a href="http://www.wago.com/850-827">www.wago.com/850-827</a>                 |
|    | <b>Item no.: 850-827/002-000</b><br>IP65 enclosure; Aluminium (RAL 7035); WxHxD (320x100x160 mm); 4 x M20, 8 x M16, 17 x M12 cable grip  | <a href="http://www.wago.com/850-827/002-000">www.wago.com/850-827/002-000</a> |
|    | <b>Item no.: 850-828</b><br>IP65 enclosure; Aluminium (RAL 7032); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip         | <a href="http://www.wago.com/850-828">www.wago.com/850-828</a>                 |
|    | <b>Item no.: 850-828/002-000</b><br>IP65 enclosure; Aluminium (RAL 7035); WxHxD (480x100x160 mm); 4 x M20, 10 x M16, 35 x M12 cable grip | <a href="http://www.wago.com/850-828/002-000">www.wago.com/850-828/002-000</a> |
|   | <b>Item no.: 850-834</b><br>IP65 enclosure; Polyester (RAL 7032); WxHxD (164x100x164 mm); 9 x M12, 4 x M20                               | <a href="http://www.wago.com/850-834">www.wago.com/850-834</a>                 |
|  | <b>Item no.: 850-835</b><br>IP65 enclosure; Polyester (RAL 7032); WxHxD (244x100x164 mm); 4 x M20, 4 x M16, 14 x M12 cable grip          | <a href="http://www.wago.com/850-835">www.wago.com/850-835</a>                 |
|  | <b>Item no.: 850-836</b><br>IP65 enclosure; Polyester (RAL 7032); WxHxD (324x100x164 mm); 4 x M20, 8 x M16, 17 x M12 cable grip          | <a href="http://www.wago.com/850-836">www.wago.com/850-836</a>                 |

**Carrier rail**

|  |  |  |
|--|--|--|
|  | <b>Item no.: 210-112</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 25 mm | <a href="http://www.wago.com/210-112">www.wago.com/210-112</a> |
|  | <b>Item no.: 210-113</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; according to EN 60715                  | <a href="http://www.wago.com/210-113">www.wago.com/210-113</a> |
|  | <b>Item no.: 210-114</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; similar to EN 60715                   | <a href="http://www.wago.com/210-114">www.wago.com/210-114</a> |
|  | <b>Item no.: 210-115</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; according to EN 60715; "Hole width 18 mm | <a href="http://www.wago.com/210-115">www.wago.com/210-115</a> |
|  | <b>Item no.: 210-118</b><br>Steel carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715                 | <a href="http://www.wago.com/210-118">www.wago.com/210-118</a> |
|  | <b>Item no.: 210-196</b><br>Aluminum carrier rail; 35 x 8.2 mm; 1.6 mm thick; 2 m long; unslotted; similar to EN 60715               | <a href="http://www.wago.com/210-196">www.wago.com/210-196</a> |
|  | <b>Item no.: 210-197</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; similar to EN 60715                     | <a href="http://www.wago.com/210-197">www.wago.com/210-197</a> |

|  |   |  |
|--|---|--|
|  | <b>Item no.: 210-198</b><br>Copper carrier rail; 35 x 15 mm; 2.3 mm thick; 2 m long; unslotted; according to EN 60715           | <a href="http://www.wago.com/210-198">www.wago.com/210-198</a> |
|  | <b>Item no.: 210-504</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; slotted; galvanized; according to EN 60715   | <a href="http://www.wago.com/210-504">www.wago.com/210-504</a> |
|  | <b>Item no.: 210-505</b><br>Steel carrier rail; 35 x 7.5 mm; 1 mm thick; 2 m long; unslotted; galvanized; according to EN 60715 | <a href="http://www.wago.com/210-505">www.wago.com/210-505</a> |
|  | <b>Item no.: 210-506</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; unslotted; galvanized; similar to EN 60715  | <a href="http://www.wago.com/210-506">www.wago.com/210-506</a> |
|  | <b>Item no.: 210-508</b><br>Steel carrier rail; 35 x 15 mm; 1.5 mm thick; 2 m long; slotted; galvanized; similar to EN 60715    | <a href="http://www.wago.com/210-508">www.wago.com/210-508</a> |

**Marking accessories**

|  |  |  |
|--|--|--|
|    | <b>Item no.: 2009-145</b><br>Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type         | <a href="http://www.wago.com/2009-145">www.wago.com/2009-145</a>                 |
|    | <b>Item no.: 2009-145/000-002</b><br>Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type | <a href="http://www.wago.com/2009-145/000-002">www.wago.com/2009-145/000-002</a> |
|    | <b>Item no.: 2009-145/000-005</b><br>Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type | <a href="http://www.wago.com/2009-145/000-005">www.wago.com/2009-145/000-005</a> |
|  | <b>Item no.: 2009-145/000-006</b><br>Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type | <a href="http://www.wago.com/2009-145/000-006">www.wago.com/2009-145/000-006</a> |
|  | <b>Item no.: 2009-145/000-007</b><br>Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type | <a href="http://www.wago.com/2009-145/000-007">www.wago.com/2009-145/000-007</a> |
|  | <b>Item no.: 2009-145/000-012</b><br>Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type | <a href="http://www.wago.com/2009-145/000-012">www.wago.com/2009-145/000-012</a> |
|  | <b>Item no.: 2009-145/000-023</b><br>Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type | <a href="http://www.wago.com/2009-145/000-023">www.wago.com/2009-145/000-023</a> |
|  | <b>Item no.: 2009-145/000-024</b><br>Mini-WSB Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type | <a href="http://www.wago.com/2009-145/000-024">www.wago.com/2009-145/000-024</a> |
|  | <b>Item no.: 248-501</b><br>Miniature WSB Quick marking system; plain; Marker width 5 mm; 10 strips with 10 markers per card | <a href="http://www.wago.com/248-501">www.wago.com/248-501</a>                   |
|  | <b>Item no.: 248-501/000-002</b><br>Mini-WSB marking card; as card; not stretchable; plain; snap-on type                     | <a href="http://www.wago.com/248-501/000-002">www.wago.com/248-501/000-002</a>   |
|  | <b>Item no.: 248-501/000-005</b><br>Mini-WSB marking card; as card; plain; snap-on type                                      | <a href="http://www.wago.com/248-501/000-005">www.wago.com/248-501/000-005</a>   |





**Item no.: 248-501/000-006**  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

[www.wago.com/248-501/000-006](http://www.wago.com/248-501/000-006)



**Item no.: 248-501/000-007**  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

[www.wago.com/248-501/000-007](http://www.wago.com/248-501/000-007)



**Item no.: 248-501/000-012**  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

[www.wago.com/248-501/000-012](http://www.wago.com/248-501/000-012)



**Item no.: 248-501/000-017**  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

[www.wago.com/248-501/000-017](http://www.wago.com/248-501/000-017)



**Item no.: 248-501/000-023**  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

[www.wago.com/248-501/000-023](http://www.wago.com/248-501/000-023)



**Item no.: 248-501/000-024**  
Mini-WSB marking card; as card; not stretchable; plain; snap-on type

[www.wago.com/248-501/000-024](http://www.wago.com/248-501/000-024)



**Item no.: 750-103**  
Group marker carrier

[www.wago.com/750-103](http://www.wago.com/750-103)



**Item no.: 750-107**  
Group marker carrier

[www.wago.com/750-107](http://www.wago.com/750-107)

## Downloads

### Documentation

#### Manual

|  |              |        |          |
|--|--------------|--------|----------|
| 2AI Thermocouple, configurable /XTR for eXTReme environmental conditions | Jun 10, 2016 | 2.3 MB | Download |
|--|--------------|--------|----------|

#### Bid Text

|                 |              |                |          |
|-----------------|--------------|----------------|----------|
| 750-469/040-000 | Jan 19, 2016 | DOC<br>31.7 kB | Download |
|-----------------|--------------|----------------|----------|

#### Additional Information

|  |              |          |          |
|--|--------------|----------|----------|
| Disposal; Electrical and electronic equipment, Packaging | Oct 15, 2018 | 265.8 kB | Download |
|--|--------------|----------|----------|

#### System Description

|  |              |        |          |
|--|--------------|--------|----------|
| System Manual /XTR<br>Basic conditions and recommendations for higher operational safety | Aug 11, 2016 | 2.9 MB | Download |
|--|--------------|--------|----------|

Overview on WAGO-I/O-SYSTEM 750 approvals



Jun 6, 2017

Download

314.9 kB

---

750 XTR Series I/O-System – General Product Information

Jun 6, 2017

Download

881.2 kB

## smartDATA

### CAD data

3D Download 750-469/040-000

URL

Download

## Product family

### 750 XTR Series – I/O System

I/O-System 750 XTR: Dort automatisieren, wo jedes andere System an seine Grenzen stößt – und das zuverlässig und wirtschaftlich! XTR – dieses Kürzel im Systemnamen steht für extremen Schutz vor klimatischen Einflüssen, Schwingungen, Erschütterungen und Überspannungen.

[Learn more about the product family.](#)

[Show all products from the family](#)

Subject to changes.

---

WAGO Kontakttechnik GmbH & Co. KG

Hansastr. 27

32423 Minden

Phone: +49571 887-0 | Fax: +49571 887-169

Email: [info.de@wago.com](mailto:info.de@wago.com) | Web: [www.wago.com](http://www.wago.com)

Do you have any questions about our products?

We are always happy to take your call at +49 (571) 887-44222.